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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,058	08/29/2003	Tsuyahiko Shimada	826.1888	8997

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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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CHAWAN, SHEELA C

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/651,058	SHIMADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sheela C. Chawan	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/29/03, 10/6/03, 11/20/06</u> .                              | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 8/29/03, 10/6/03, 11/20/06, the information disclosure statement is being considered by the examiner.

***Drawings***

3. The Examiner has approved drawings filed on 8/29/03.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 11, 14-16, are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagida et al., (US. 5,775,918).

As to claim 1, Yanagida discloses a slip processing device that processes a slip with an answer column to be checked with a mark, comprising:

a slip recognition unit detecting the mark checked in the answer column, based on the image data of the slip (note, a slip processing device is used to process

information on a paper (slip) such as a question paper, a small document (bank documents etc., to identify selected answers and recognize correct answers, correct an incorrect answer, composite the answers and produce an output, column 2, lines 50-67).

an image accentuation unit accentuating pixels located in the vicinity of the answer column in the image data by a special accentuation method, based on the detected result (fig 14, column 13, lines 12- 35, 63- 67, column 14, lines 1- 40); and

an output control unit outputting the image data accentuated by the image accentuation unit on a display device (fig 15 A).

As to claim 2, Yanagida discloses the slip processing device according to claim 1, wherein said image accentuation unit is a pixel value modification unit modifying the values of pixels located in the vicinity of the answer column (fig 13, element 52, column 13, lines 20-26).

As to claim 3, Yanagida discloses the slip processing device according to claim 2, wherein said image value modification unit modifies the pixel values to values other than the values of the pixels composing the mark (fig 13, element 52, column 13, lines 20-26).

As to claim 4, Yanagida discloses the slip processing device according to claim 2, wherein the pixels located in the vicinity of the answer column are pixels located within the frame of the answer column (fig 13, element 53, column 13, lines 36-44).

As to claim 5, Yanagida discloses the slip processing device according to claim 4, wherein said image value modification unit modifies the values of pixels other than

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the pixels checked with the mark when modifying the values of pixels located in the vicinity of the answer column (fig 13, element 53, column 13, lines 36-44, 63-67, column 14, lines 1-2).

As to claim 6, Yanagida discloses the slip processing device according to claim 4, wherein said pixel value modification unit modifies the values of pixels composing the mark when modifying the values of pixels located in the vicinity of the answer column (fig 13, element 51, column 13, lines 21-27).

As to claim 7, Yanagida discloses the slip processing device according to claim 2, wherein the pixels located in the vicinity of the answer column are located outside the frame of the answer column and are located less than a specific number of pixels away from the frame (note, image sensor correcting the pixel position based on deviations and vertical direction, column 14, lines 15-20).

As to claims 8 and 11, Yanagida discloses the slip processing device according to claim 1, further comprising a recognized result modification unit modifying the detected result, wherein if the answer column is designated in the accentuated image data, the recognized result modification unit modifies the detected result and the accentuation method of pixels located in the vicinity of the designated answer column, and said output control unit outputs the modified image data to the display device (column 16, lines 19-26).

As to claim 9, Yanagida discloses the slip processing device according to claim 8, wherein said recognized result modification unit determines a detected result after

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modification, based on the result of the mark checked in the designated answer column, that is detected by the slip recognition unit (column 16, lines 19-26).

As to claim 14, see the rejection of claim 1 above.

As to claim 15, see the rejection of claim 1 above.

As to claim 16, see the rejection of claim 1, above.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagida et al., (US. 5,775,918), as applied to the claims 1-9,11,14-16above and further in view of Matsuno et al., (US.6,320,983 B1).

Regarding claim 10, Yanagida discloses system for making examination papers and having an automatic marking function. Yanagida is silent about a pointing device.

Matsuno discloses method and apparatus for character recognition applied to a slip processor. The system comprises of:

A pointing device, wherein the designation of pixels is made by selecting the

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image data outputted on the display device using the pointing device (fig 2, element 300).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yanagida to include a pointing device. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Yanagida by the teaching of Matsuno in which the cost of image reading mechanism as well as of the slip- forms can be reduced, (as suggested by of Matsuno at column 7, lines 7- 10).

As to claim 12, Matsuno discloses the slip processing device according to claim 11, wherein said output control unit scrolls the detected result information outputted on the display device in synchronization with the image data outputted on the display device (fig 1, element 10 and 30, column 11, lines 33-39).

As to claim 13, Matsuno discloses the slip processing device according to claim 11, wherein said output control unit outputs the detected result information on the display device for each question contained on the slip, if the image data outputted on the display device is scrolled, said output control unit detects the question displayed in a prescribed position of the display device, and said output control unit outputs the detected result information corresponding to the detected question on the display device. (column 11, lines 55-67).

***Other prior art cited***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hikawa (US. 5,235,655) discloses mark placing and canceling method and mark recognizing device.

Engel et al., (US.4,243,876) discloses background light intensity compensation circuit for a line scan camera system.



**Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan  
Patent Examiner  
Group Art Unit 2624  
Jan 7, 2007

*Sheela Chawan*  
SHEELA CHAWAN  
PRIMARY EXAMINER